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(71) Applicant: **CALIFORNIA INSTITUTE OF
TECHNOLOGY**
Pasadena California 91125 (US)

(72) Inventors:

- **Meade, Thomas, J.**
Altadena, CA 91001 (US)
- **Kayyem, Jon, F.**
Pasadena, CA 91106 (US)
- **Fraser, Scott, E.**
Newport Beach, CA 92660 (US)

(74) Representative: **Walton, Seán Malcolm et al**
MEWBURN ELLIS,
York House,
23 Kingsway
London WC2B 6HP (GB)

(54) **Nucleic acid mediated electron transfer**

(57) The present invention provides for the selective covalent modification of nucleic acids with redox active moieties such as transition metal complexes. Electron donor and electron acceptor moieties are covalently bound to the ribose-phosphate backbone of a nucleic acid at predetermined positions. The resulting complexes represent a series of new derivatives that are bimo-

lecular templates capable of transferring electrons over very large distances at extremely fast rates. These complexes possess unique structural features which enable the use of an entirely new class of bioconductors and photoactive probes.



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
A	WO 93 10267 A (IGEN INC) 27 May 1993 (1993-05-27) * the whole document *		C12Q1/68
A	C. J. MURPHY ET AL.: "Long-Range Photoinduced Electron Transfer Through a DNA Helix" SCIENCE, vol. 262, pages 1025-9, XP002041920 * the whole document *		
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A	EP 0 478 319 A (TOKYO SHIBAURA ELECTRIC CO) 1 April 1992 (1992-04-01) -----		
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			C12Q
The present search report has been drawn up for all claims			
Place of search MUNICH		Date of completion of the search 13 February 2002	Examiner Bardili, W
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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